

REMARKS

I. Introduction

Claims 17 to 40 are currently pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

As an initial matter, Applicants note with appreciation the indication that claims 32 to 40 are allowed.

II. Oath/Declaration

As regards the declaration, a supplemental declaration will be submitted under separate cover.

III. Rejection of Claims 17, 19, 30, 31, and 41 Under 35 U.S.C. § 102(e)

Claims 17, 19, 30, 31, and 41 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,120,925 ("Kawatsu et al."). Applicants respectfully submit that Kawatsu et al. do not anticipate the present claims for the following reasons.

As an initial matter, claim 41 was canceled in the Amendment filed on July 8, 2004. Thus, it is respectfully submitted that the present rejection is moot with respect to claim 41.

Claim 17 relates to a fuel-cell system and recites that the fuel-cell system includes an oxidation device configured to convert carbon monoxide into carbon dioxide and includes a water-injection device configured to inject water into the oxidation device. Claim 17 further recites that the oxidation device is configured to convert carbon monoxide by a reaction of carbon monoxide with oxygen of the injected water, and that a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device based on the oxygen of the injected water.

Kawatsu et al. purport to relate to an apparatus for and method of reducing concentration of carbon monoxide and fuel-cells generator system with such apparatus. While Kawatsu et al. mention that a supply of water is fed to a selective CO oxidizing unit, nowhere do Kawatsu et al. disclose or suggest a system in which a reduced amount of supplemental oxygen containing gas is supplied based on an amount of oxygen supplied by injected water. Kawatsu et al. discuss the

control of a supply of an oxidizing gas, for example, based on a concentration of carbon monoxide in a hydrogen-rich gas, and the control of a supply of water, for example, based on the amount of supplied oxidizing gas, col. 3, lines 14 to 23, but nowhere do Kawatsu et al. disclose the reverse. That is, nowhere do Kawatsu et al. discuss the control of a supply of a supplemental oxygen containing substance based on an amount of oxygen supplied by injected water.

Furthermore, while Kawatsu et al. mention that a supply of water is fed to a selective CO oxidizing unit, the water is only supplied to cool selective CO oxidizing catalysts stored in the selective CO oxidizing unit. That is, Kawatsu et al. do not disclose, or even suggest, that the CO oxidizing unit is configured to oxidize carbon monoxide into carbon dioxide by a reaction with oxygen of the supplied water. Rather, Kawatsu et al. describe feeding an oxygen-containing oxidizing gas to the oxidizing unit and state that “[t]he catalyst in the oxidizing unit enables oxygen included in the introduced oxidizing gas to be bonded to the carbon monoxide,” col. 2, lines 28 to 30 (emphasis added).

The Final Office Action alleges at page 7 that Kawatsu et al. disclose “catalyst species [that] are at least *capable* of catalyzing a water shift reaction” (italics in original). As an initial matter, the Final Office Action’s reliance on U.S. Patent No. 6,455,182 and European Published Patent Application No. 1 161 991 is misplaced. In this regard, U.S. Patent No. 6,455,182 issued on September 24, 2002 from U.S. Patent Application Serial No. 09/852,333, filed on May 9, 2001, and European Published Patent Application No. 1 161 991 was published on December 12, 2001. The present application has an international filing date of May 17, 1999. Accordingly, neither U.S. Patent No. 6,455,182 nor European Published Patent Application No. 1 161 991 constitutes prior art against the present application, and, therefore, the Final Office Action’s reliance on U.S. Patent No. 6,455,182 and European Published Patent Application No. 1 161 991 is improper. Furthermore, whether Kawatsu et al. disclose “catalyst species [that] are at least *capable* of catalyzing a water shift reaction,” which Applicants do not concede, does not constitute a disclosure or suggestion that an “oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction of carbon monoxide with oxygen supplied by . . . water injected by [a] water-injection device” as recited in claim 17. To the extent that the Final Office Action is relying on the doctrine of inherency, the Final Office Action “must provide a basis in fact and/or technical

reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flows from the teachings of the applied prior art.” Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Furthermore, inherency “may not be established by probabilities or possibilities,” and “[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient.” In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999). Even if the catalysts of Kawatsu et al. are capable of converting carbon monoxide to carbon dioxide by a reaction of the carbon monoxide with oxygen supplied by injected water under a given set of circumstances -- which Applicants do not concede -- the Final Office Action has not set forth a basis in fact that the catalysts of Kawatsu et al. are necessarily configured to do so, and even admits, at page 8 that “the water does not participate in the oxidation reaction.” For example, nowhere do Kawatsu et al. indicate that water is injected into the catalysts while carbon monoxide of the hydrogen-rich gas is present in the catalysts.

It is “well settled that the burden of establishing a prima facie case of anticipation resides with the [United States] Patent and Trademark Office.” Ex parte Skinner, 2 U.S.P.Q.2d 1788, 1788 to 1789 (Bd. Pat. App. & Inter. 1986). To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that Kawatsu et al. do not disclose, or even suggest, all of the limitations recited in claim 17. Indeed, the Final Office Action admits on page 8 that according to Kawatsu et al., “water does not participate in the oxidation reaction.”

In view of the foregoing, it is respectfully submitted that Kawatsu et al. do not disclose, or even suggest, all of the limitations of claim 17. It is therefore respectfully submitted that Kawatsu et al. do not anticipate claim 17.

As for claims 19, 30 and 31, which ultimately depend from claim 17 and therefore include all of the limitations of claim 17, it is respectfully submitted that

Kawatsu et al. do not anticipate these dependent claims for at least the same reasons given above in support of the patentability of claim 17.

IV. Rejection of Claims 17, 22 to 25, and 28 to 30 Under 35 U.S.C. § 103(a)

Claims 17, 22 to 25, and 28 to 30 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,630,679 ("Buswell et al.") and Kawatsu et al. It is respectfully submitted that the combination of Buswell et al. and Kawatsu et al. does not render unpatentable the present claims for the following reasons.

As indicated above, claim 17 recites that the oxidation device is configured to convert carbon monoxide by a reaction with oxygen of the injected water, and that a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device based on the oxygen of the injected water.

Claim 28 includes subject matter similar to that of claim 17.

As further indicated above, Kawatsu et al. do not disclose, or even suggest all of the features of claim 17. Similarly, Kawatsu et al. do not disclose, or even suggest all of the features of claim 28. Buswell et al. are not relied upon for disclosing or suggesting the limitations of claims 17 and 28 not disclosed or suggested by Kawatsu et al. Indeed, it is respectfully submitted that Buswell et al. do not disclose or suggest the limitations of claims 17 and 28 not disclosed or suggested by Kawatsu et al. It is therefore respectfully submitted that the combination of Kawatsu et al. and Buswell et al. does not render unpatentable claims 17 and 28.

As for claims 22 to 25, and 30, which ultimately depend from claim 17 and therefore include all the limitations of claim 17, it is respectfully submitted that the combination of Kawatsu et al. and Buswell et al. does not render unpatentable these dependent claims for at least the same reasons given above in support of the patentability of claim 17.

As for claim 29, which depends from claim 28 and therefore includes all of the limitations of claim 28, it is respectfully submitted that the combination of Kawatsu et al. and Buswell et al. does not render unpatentable dependent claim 29 for at least the same reasons given above in support of the patentability of claim 28.

V. Rejection of Claims 17 to 21, 30, and 31 Under 35 U.S.C. § 103(a)

Claims 17 to 21, 30, and 31 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,165,633 ("Negishi") and Kawatsu et al. It is respectfully submitted that the combination of Negishi and Kawatsu et al. does not render unpatentable the present claims for the following reasons.

As indicated above, claim 17 recites that the oxidation device is configured to convert carbon monoxide by a reaction with oxygen of the injected water, and that a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device based on the oxygen of the injected water.

Claims 18 and 20 include subject matter similar to that of claim 17.

As further indicated above, Kawatsu et al. do not disclose, or even suggest all of the features of claim 17. Similarly, Kawatsu et al. do not disclose, or even suggest all of the features of claims 18 and 20. Negishi is not relied upon for disclosing or suggesting the limitations of claims 17, 18, and 20 not disclosed or suggested by Kawatsu et al. Indeed, it is respectfully submitted that Negishi does not disclose or suggest the limitations of claims 17, 18, and 20 not disclosed or suggested by Kawatsu et al. It is therefore respectfully submitted that the combination of Kawatsu et al. and Negishi does not render unpatentable claims 17, 18, and 20.

As for claims 19, 30, and 31, which ultimately depend from claim 17 and therefore include all of the limitations of claim 17, it is respectfully submitted that combination of Negishi and Kawatsu et al. does not render unpatentable these dependent claims for at least the same reasons given above in support of the patentability of claim 17.

As for claim 21, which depends from claim 20 and therefore includes all of the limitations of claim 20, it is respectfully submitted that combination of Negishi and Kawatsu et al. does not render unpatentable dependent claim 20 for at least the same reasons given above in support of the patentability of claim 21.

VI. Rejection of Claims 17 to 19, 26, 27, 30, and 31 Under 35 U.S.C. § 103(a)

Claims 17 to 19, 26, 27, 30, and 31 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,077,620 ("Pettit") and Kawatsu et al. It is respectfully submitted that the combination of Pettit and

Kawatsu et al. does not render unpatentable the present claims for the following reasons.

As indicated above, claims 17 and 18 recite that the oxidation device is configured to convert carbon monoxide by a reaction with oxygen of the injected water, and that a reduced amount of a supplemental oxygen containing substance is supplied to the oxidation device based on the oxygen of the injected water.

Independent claim 26 includes subject matter similar to that of claims 17 and 18.

As further indicated above, Kawatsu et al. do not disclose, or even suggest all of the features of claims 17 or 18. Similarly, Kawatsu et al. do not disclose, or even suggest all of the features of claim 26. Pettit is not relied upon for disclosing or suggesting the limitations of claims 17, 18, and 26 not disclosed or suggested by Kawatsu et al. Indeed, it is respectfully submitted that Pettit does not disclose or suggest the limitations of claims 17, 18, and 26 not disclosed or suggested by Kawatsu et al. It is therefore respectfully submitted that the combination of Kawatsu et al. and Pettit does not render unpatentable claims 17, 18, and 26.

As for claims 19, 30, and 31, which ultimately depend from claim 17 and therefore include all of the limitations of claim 17, it is respectfully submitted that combination of Pettit and Kawatsu et al. does not render unpatentable these dependent claims for at least the same reasons given above in support of the patentability of claim 17.

As for claim 27, which depends from claim 26 and therefore includes all of the limitations of claim 26, it is respectfully submitted that combination of Pettit and Kawatsu et al. does not render unpatentable dependent claim 27 for at least the same reasons given above in support of the patentability of claim 26.

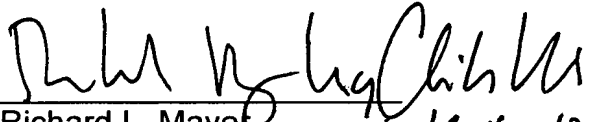
VII. Conclusion

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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